

A NEW *LOMATIUM* (APIACEAE) FROM THE
SIERRAN CREST OF CALIFORNIA

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ABSTRACT

Lomatium shevockii, a low, tufted, acaulescent species, is described from the southern Sierra Nevada, Kern County, California. Although the growth habit is reminiscent of some species of *Oreonana* and *Cymopterus*, the new species is clearly a *Lomatium*, based on morphology and ecology. It appears closely related to *Lomatium rigidum*, but differs strikingly by its flower color, subcapitate inflorescence, nearly prostrate peduncles, smaller leaves, and sessile fruit.

An exceedingly rare species of *Lomatium* was discovered by Mr. Shevock on 7 April 1984 during a cursory field survey of Owens Peak via the newly constructed section of the Pacific Crest Trail north of Walker Pass. Although at that time only a few young leaves had emerged, the collector correctly identified the plants as "new" for the southern Sierra Nevada. At first glance the young leaves resemble those of *Oreonana clementis*. Closer observation of the blue-green, glabrous, white spinule-tipped leaves, however, resulted in a tentative assignment to *Cymopterus*—a genus that has several species with white-spinulose leaves. Subsequent collection of mature fruit in June 1986, conclusively placed the species in *Lomatium*.

Lomatium shevockii Hartman & Constance, sp. nov. (Fig. 1)

Plantae perennes glabrae et glaucae acaulescentes 4–12 cm altae e radice palari elongato cum caudice fibrilloso. Folia rosulata ovato-deltaoidea 1.5–4 cm longa, 2–5 cm lata, 2–3-pinnato-pinnatifida divisionibus ultimis oblongis ovatisve saepe confluentibus acerosis; petioli 1.5–5.5 cm longis scarioso-vaginantes. Pedunculi folia aequantes excedentesve 4–12 cm longi; involucrium plerumque nullum; radii 5–9 inaequales divergentes vel reflexi; umbellulae andromonoeciae ex floribus perfectis 5–10+ et floribus staminatis 1–4 constantes; involucrium dimidiatum bracteolis 3–6 lanceolatis vel ovatis integris distinctis 1–3.5 mm longis. Flores purpurei, sepalis

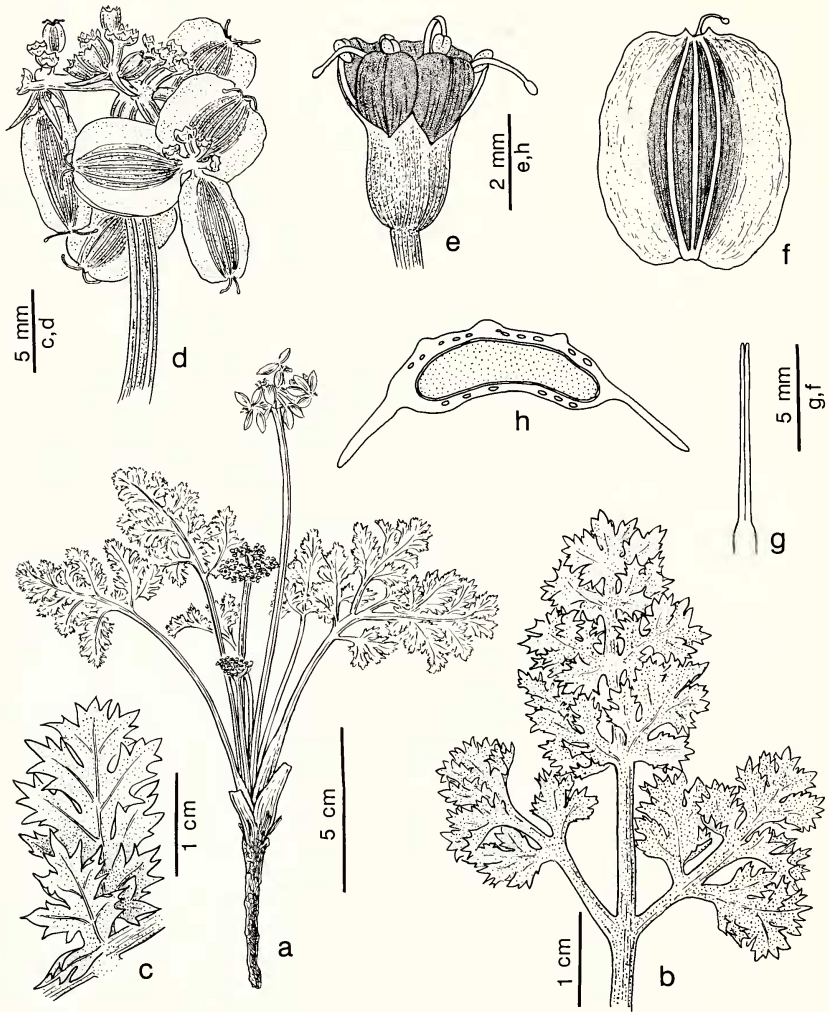


FIG. 1. *Lomatium shevockii*. a. Habit. b. Foliage leaf. c. Leaflet. d. Fruiting umbel. e. Flower. f. Fruit, dorsal view. g. Carpophore. h. Transverse section of mericarp. (a, c, e from *Shevock et al.* 11197; b, d, f-h from the type collection.)

evidentibus triangularibus vel lanceolatis, petalis obovatis, antheris flavis, stylis 2–2.5 mm longis; stylopodium nullum, disco praesenti; pedicelli usque ad 1 mm longi; carpophorum bipartitum. Fructus dorsaliter compressus ellipticus orbicularisve 8–10 mm longus 7–9 mm latus apice rotundatis basi emarginatis, alis tenuibus distinctis quam corpore parum angustioribus; vittae in intervallis 3–5, in commissuris 8–10.

Low, tufted, herbaceous perennial 4–12 cm tall, acaulescent, aromatic, with a primary root 20–30 cm long or more, 0.3–1.2 cm in diameter at summit, the crown unbranched or with few to several branches arising 4–15 cm below ground, the crown or branches enveloped their distal 1–3 cm by persistent leaf bases or their frayed remains, which may double the apparent diameter. Leaves broadly ovate to deltoid, 1.5–4 cm long, 2–5 cm wide, 2–3-pinnate-pinnatifid, pale green, glaucous, glabrous; primary leaf divisions 3–5 usually in opposite pairs, the terminal one deeply pinnate-1–2-pinnatifid, usually confluent with the upper pair, the lower distinct, more widely spread proximally, the lowest often remote, the lateral primary divisions asymmetrically pinnate-1–2-pinnatifid into 40–50 or more often confluent oblong to ovate segments, the lobes and teeth acerose; petiole subterete to grooved adaxially, 1.5–5.5 cm long, expanded at the base into a scarious sheath. Inflorescence a compact compound umbel 10–25 mm in diameter, or enlarging to 40 mm in fruit; peduncles ascending to erect in flower, or decumbent in fruit, 4–12 cm long, equaling to much exceeding the leaves, glabrous; involucre none, or rarely of an ovate to lanceolate bract 2–6 mm long; rays 5–9, 1–6 mm long in flower and up to 11 mm in fruit, subterete to flattened, unequal, those bearing fruit becoming divergent to reflexed and markedly enlarged at the base; umbellets andromonoecious, of 1–4 staminate and 5–10 (or more) perfect flowers or of all perfect or all staminate flowers; involucels dimidiate, of 3–6 mostly lanceolate to ovate bractlets that are entire, acute to acuminate, 1–3.5 mm long, and about equaling to somewhat exceeding the flowers, usually distinct or essentially so, with a thin, white or purplish, scarious margin, glabrous; pedicels 0.1–2 mm long on staminate flowers, 0.1–1 mm on hermaphroditic flowers, those bearing fruit becoming markedly enlarged at base. Flowers purple; sepals triangular to lanceolate, 0.2–0.6 mm long, often unequal, enlarging little in fruit, greenish; petals 1.6–1.9 mm long; anthers yellow, 0.7–0.8 mm long; filaments 1–1.3 mm long; styles subterete, 2–2.4 mm long, enlarging little in fruit, spreading to recurved; stylopodium none; disc present; ovary glabrous, glaucous; carpophore bipartite. Fruit dorsally flattened, broadly elliptic to orbicular, 8–10 mm long, 7–9 mm broad, glabrous, the wings distinct, narrower than the body; vittae 3–5 in intervals, 8–10 on commissure.

TYPE: CA, Kern Co., se. slope of Owens Peak, eastern crest of the southern Sierra Nevada, T25S R37E S21 ne.¼ MDB+M, 8200 ft (2500 m), 11 Jun 1986, *James R. Shevock 11681* (Holotype: UC; isotypes: CAS, MO, NY, RM, RSA, US).

PARATYPES: CA, Kern Co., type locality, 7 Apr 1984, *Shevock 10812* (CAS: leaf only), 27 May 1985, *Shevock, Norris & Rose 11197* (CAS, MO, NY, RM, RSA, UC); se. slope of Mt. Jenkins above Pacific Crest Trail, T25S R37E S34 nw.¼ MDB+M, 7300 ft (2225 m), 21 Apr 1986, *Shevock & Ertter 11439* (CAS, RSA, UC).

Distribution, ecology, and phenology. *Lomatium shevockii* occurs on colluvial slopes and talus, usually along contact zones of metamorphic and granitic rock in open mixed coniferous forest or pinyon pine/canyon live oak woodland. Populations are restricted to the eastern side of the crest, generally between 2225 and 2500 m. Plants occurring at the lower of these elevations are in canyon bottoms, where the seeds presumably washed downslope primarily from late summer thunderstorms. Flowers appear from late April to mid-May, with fruit developing by mid-June. All populations are on federal lands administered by the California Desert Conservation Area, Bureau of Land Management.

This *Lomatium* is apparently a very restricted endemic. Habitats with the combination of slope, aspect, geology, and elevation required by *L. shevockii* are limited along the rugged crest and are believed to comprise less than 5 air km. The population near the summit of Owens Peak is within an open, park-like mixed coniferous forest of *Pinus jeffreyi*, *P. flexilis*, *P. monophylla*, *P. lambertiana*, *Abies concolor*, and *Juniperus occidentalis* subsp. *australis*. On steeper slopes below this forest, the species extends into openings in the pinyon pine/canyon live oak woodland. The site of the small population on Mt. Jenkins lacks limber pines, but is otherwise similar. No single set of associated species accompany all populations of *Lomatium shevockii*, but *Allium burlewii*, *Eriogonum wrightii* var. *subscaposum*, *Mimulus* sp., *Monardella* spp., *Orochaenactis thysanocarpha*, *Salvia pachyphylla*, and *Zauschneria latifolia* were found in proximity.

Despite the rarity of the new species, the rugged terrain it inhabits should protect it from human disturbance. Other rare taxa being inventoried by the California Natural Diversity Data Base and the California Native Plant Society that are known to occur on Owens Peak include *Eriogonum breedlovei* var. *shevockii*, *Monardella* sp., *Phacelia novemmillensis*, and *Raillardella muiirii*.

Lomatium shevockii belongs to the *Euryptera* group, which comprises seven species and extends along the Pacific Coast from southern Oregon to Baja California and Guadalupe Island. Coulter and Rose (1900) said of *Euryptera*, which they treated as a genus distinct from *Lomatium*: "... differs from typical *Lomatium* especially in its foliage, which is much more simple, with broad often orbicular leaflets, and sharp mucronate teeth. The wings of the fruit are inclined to be distinct, while in *Lomatium* the wings are united and project below the seed."

ACKNOWLEDGMENTS

The authors are grateful to Mark A. Schlessman, Robert Meinke, and the Editor for numerous helpful comments. Charlotte Mentges Hannan provided the illustration.

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(Received 8 Mar 1987; revision accepted 30 Nov 1987.)

ANNOUNCEMENT

NEW PUBLICATION

DORN, ROBERT D. 1988. *Vascular Plants of Wyoming*, illustrated by JANE L. DORN. Mountain West Publishing, Cheyenne, WY. vi + 340 pp., paperbound. [Keys to 120 families, 650 genera, 2369 species, 39 subspecies, and 690 varieties; 93 new combinations, 1 new species, 4 new varieties, and 1 new name; section of taxonomic notes. Available postpaid for \$13.00 from Mountain West Publishing, Cheyenne, WY 82003.]

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HUNTER, S. C. and T. E. PAYSAN, Vegetation classification system for California: User's guide, *U.S.D.A. For. Serv., Gen. Tech. Rep.* PSW-94: i-ii, 1-12, 1986. [A system of classifying plant communities in California, with guidelines for recognizing such in the field.]

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